



Recognition of patients who require emergency assistance: A descriptive study

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Abstract:

Objective: This study aimed to investigate and describe patient characteristics and the process nurses use to identify patients about whom they have serious concerns in a new research context.

Design: The research design employed qualitative methods, specifically exploratory and descriptive approaches, utilizing in-depth interviews and purposive sampling.

Setting: The study was conducted in a teaching hospital and a peripheral hospital

Participants: The participants consisted of registered nurses (N = 32) with at least 5 years of experience and a history of calling the medical emergency team (MET). The mean years of experience as a registered nurse were 14 years, and the average calls made to the MET since employment in the current hospital were 16 calls.

Findings: The primary findings revealed that nurses relied on four patient characteristics to determine the MET criterion of being "seriously worried about a patient." These characteristics included (1) a sense of something being "off," (2) changes in color, (3) signs of agitation, and (4) observations of marginal or no change in patient condition. The process of gathering and interpreting information to identify deteriorating patients involved tactile assessments, visual observations, auditory cues, intuition, and drawing from past experiences and knowledge.

Conclusions: The study suggests the incorporation of the identified four characteristics into the explanation for the MET criterion of being "seriously worried about a patient." Further validation and refinement of these characteristics within the context of deteriorating patient conditions are recommended. Additionally, ongoing education programs in healthcare facilities should emphasize the use of subjective information in complex situations, facilitating early identification and rapid response to patients whose conditions are deteriorating.

Introduction:

Since its inception in 1989, the medical emergency team (MET) has been a pivotal initiative. Modeled after principles of early recognition and rapid response akin to managing severe trauma, the MET supersedes the cardiac arrest team and offers two tiers of intervention: resuscitation for life-threatening emergencies and assessment and review for non-immediately life-threatening situations. (Liverpool Health Service, 1998)

The primary goal of the MET is to facilitate early intervention, thereby averting cardiac arrest and mitigating associated morbidity and mortality. Any staff member can summon the MET upon identifying a patient at risk based on preset criteria, which encompass acute changes indicative of deterioration. These changes include specific clinical signs such as abnormal respiratory and heart rates, low blood pressure,

neurological alterations, and a catch-all category termed "seriously worried about a patient." (Lee et al., 1995)

Notably, nurses disproportionately utilize the "seriously worried about a patient" criterion for MET calls compared to other healthcare professionals. In a recent 12-month period, nurses initiated nearly all MET calls (around 98%), with approximately 18% attributed to being "seriously worried about a patient." This trend likely stems from nurses' consistent direct patient contact, enabling them to better detect subtle changes in patient conditions. However, no prior study has delved into the specific patient characteristics that lead nurses to invoke the "seriously worried about a patient" criterion within the MET framework. Therefore, this study seeks to fill this gap by elucidating patient characteristics and the recognition process nurses employ when identifying patients who evoke serious concern but do not meet other MET criteria. (Daffurn et al., 1994)

In nursing practice, decision-making is often intricate. Nurses have demonstrated an ability to identify patients "at risk," often relying on intuition and experience. For instance, a nurse calling an emergency code for a patient deemed "going sour" just before a respiratory arrest reflected the intuitive decision-making process. Another nurse, sensing something amiss in a patient despite stable vital signs, acted promptly, leading to the discovery of a massive hemorrhage. Such experiences underscore nurses' pivotal role in early recognition of clinical deterioration. (Ellis, 1997)

Decision-making in complex situations, like deciding to call the MET, involves uncertainties and unknowns. Studies highlight the reliance on experience and past encounters with similar patient cues. Nurses draw from memories of previous patients to gauge probable outcomes and determine appropriate actions. (Benner & Tanner, 1987)

Expert nurses often have an innate sense that something is amiss with a patient even before evident physiological or psychological cues manifest. Studies have identified common characteristics of patient deterioration, including an initial sense of uncertainty, gradual pattern recognition, sudden crisis onset, and the importance of context and communication. (Benner & Wrubel, 1982)

Nurses recall patients with similar cues, utilize multiple cues, and cluster physiological and psychological cues when recognizing deterioration. They believe patients are often aware of their deteriorating condition, emphasizing the importance of holistic patient assessment. (Tierney, 1987)

Method

Study Design

This study utilized an exploratory descriptive approach, employing interviews to delve into the experiences of nurses who had called the MET for their patients. The study encompassed 4 units in a teaching hospital and 3 units in a peripheral hospital within an area health service, covering specialties such as medical, surgical, renal, gynecological, coronary care, and orthopedics. These units were chosen due to their high frequency of MET calls. Ethical approval was obtained from the institutional ethics committees of the area health service and the university.

Sample

The participants included registered nurses (RNs) from units with frequent MET calls, possessing 5 or more years of experience as RNs and a history of calling the MET. Informed consent was obtained from 32 eligible nurses who volunteered to participate. To ensure confidentiality, participants were coded numerically. The average years of experience as an RN was 14 years, with an average of 16 MET calls since employment at the current setting and approximately 2 MET calls every 3 months.

Data Collection

Data collection involved individual interviews with participants, focusing on their experiences of calling the MET for seriously worried patients. The interviews were unstructured, allowing participants to freely discuss their experiences. The interviewer prompted for clarification and elaboration when necessary. Interviews were recorded and lasted around 45 minutes each.

Data Analysis

Transcripts of the interviews were verbatim and thoroughly checked. The analysis aimed to describe the characteristics and recognition process of seriously worried patients by nurses, not meeting other MET criteria. Transcripts were reviewed twice to extract statements related to MET calling experiences. Key words and phrases regarding patient recognition and the detection process were coded and categorized. Clinical nurse consultants familiar with the MET system validated these categories, resulting in the identification of 4 patient characteristics and the skills employed in patient assessments. The findings were verified against the consultants' experiences and other RNs' accounts, ensuring the accuracy of the analysis.

Results

The analysis of the transcripts revealed that nurses relied on four main patient characteristics to apply the MET criterion of "seriously worried about a patient." These characteristics were not used in isolation but were often combined, signaling a difference in the patient's condition compared to their previous state. The four characteristics were feeling "not right," changes in color, agitation, and subtle observations that indicated a departure from the norm. Nurses used a process of gathering information that involved observing, touching, listening, feeling or sensing, and utilizing their knowledge and past experiences to detect differences and recognize patients about whom they were seriously worried.

Characteristics

Feeling "Not Right": Patients often expressed feeling unwell or not themselves. Nurses noted that patients would verbalize feelings of being different than usual or having a sense of impending doom.

Changes in Color: Nurses observed changes in patients' skin color, such as paleness or a grayish tone, which indicated a potential problem. Coldness and clamminess were also noted as concerning signs.

Agitation: Patients exhibiting agitation, restlessness, or unusual behavior raised concerns among nurses, indicating a potential deterioration in their condition.

Subtle Observations: Nurses sometimes observed marginal changes in patients' vital signs or overall appearance that were not overtly abnormal but signaled a departure from their usual state.

Process of Recognition

Nurses employed various assessment skills and information gathering techniques to recognize patients about whom they were seriously worried:

Observing and Touching: Nurses observed physical cues like color, behavior, and overall appearance. Touching helped assess temperature, clamminess, and other tactile signs.

Listening: Patients' verbal expressions of feeling unwell or different were crucial indicators.

Feeling or Sensing: Nurses sometimes had intuitive feelings or gut instincts about a patient's condition, which they associated with years of experience and familiarity with the patient.

Knowing: Nurses described a sense of "knowing" derived from experience, where they could detect subtle changes even before overt symptoms appeared. This knowing was based on familiarity with the patient's usual patterns of progress and responses to treatment.

Combining these assessment methods and relying on their intuition and knowledge, nurses were able to identify patients who warranted serious concern, even when specific clinical criteria were not met.

Discussion

Nurses who used the criterion of being "seriously worried about a patient" to call the MET relied heavily on subjective data, such as the patient's self-declared feeling of being unwell or the nurse's observation of subtle changes like color, clamminess, or agitation. This criterion often led to MET calls without clear objective physiological data, highlighting the importance of nurses' subjective assessments based on their familiarity with the patient. The subjective nature of this criterion contrasts with the objective MET criteria typically based on physiological parameters. (Cioffi & Markham, 1997)

The reliance on subjective data reflects nurses' deep familiarity with their patients, allowing them to detect small changes that precede clinical deterioration. This familiarity is a result of spending more time with patients compared to other healthcare workers. Nurses' ability to detect subtle signs and symptoms early,

before they manifest as objective physiological changes, suggests a level of intuitive expertise that is critical in clinical decision-making. (Cioffi, 1998)

This intuitive expertise aligns with Benner's concept of expert nursing practice, where knowledge is embedded in intuitive judgments derived from years of experience. Expert nurses develop a sense of "knowing" that goes beyond objective data, enabling them to anticipate changes in patients' conditions and respond effectively. This sense of knowing was evident in the study, with nurses describing a heightened awareness of subtle changes and a readiness to act based on intuition. (Grossman & Wheeler, 1997)

The recognition of early deterioration based on subjective cues mirrors findings from previous studies, where expert nurses reported knowing that something was wrong with a patient before objective signs appeared. This early recognition is crucial as it allows for timely intervention before patients reach a critical stage. Nurses' descriptions of patients feeling "just not right" or exhibiting subtle changes align with the compensatory stage of deterioration, where homeostatic mechanisms temporarily mask overt symptoms. (Radwin, 1998)

Overall, the study highlights the essential role of nurses' intuitive expertise in recognizing early signs of deterioration and making critical decisions like calling the MET based on subjective assessments. This expertise, developed through years of practice, complements objective criteria and enhances patient safety by facilitating early intervention and preventing adverse outcomes. (Burnard, 1988)

Implications and Recommendations

Specificity in MET Criteria: The identified characteristics - patient's self-declaration of feeling unwell, changes in color, clamminess, agitation, and subtle abnormalities in observations - should be incorporated into the MET criteria as descriptors for the criterion of being "seriously worried about a patient." This will provide more specific guidance for nurses when making decisions about calling the MET based on subjective assessments.

Recognition of Experienced Clinicians: The study underscores the value of past experiences in recognizing deteriorating patients and making timely MET calls. Nursing services should acknowledge and utilize the expertise of experienced clinicians in decision-making processes. Staffing considerations should ensure a mix of experienced and less experienced nurses to promote quality care and patient safety.

Validation through Research: Further research is recommended to validate the identified characteristics as reliable indicators for the "seriously worried about a patient" criterion in MET calls. This research should include all patients who receive MET calls based on this criterion to ensure comprehensive validation.

Education and Training: Education programs on emergency management, especially at the unit level, should focus on developing nurses' confidence in recognizing deteriorating patients and making MET calls based on subjective assessments. Nurses need to be empowered to act early, before patients meet specific physiologic criteria, to reduce morbidity and mortality.

Value of Subjective Information: The study highlights the importance of subjective information, often considered intuitive and experiential, in complex clinical decision-making. This information should be recognized and valued for its role in early identification and rapid response to deteriorating patients, aligning with the primary principle of the MET initiative.

Implementing these recommendations can enhance the effectiveness of MET systems, improve patient outcomes, and empower nurses to make informed decisions based on both objective and subjective assessments of patient condition.

References

1. Lee, A., Bishop, G., Hillman, K., & Daffurn, K. (1995). The medical emergency team. *Anaesthesia and Intensive Care*, 23, 183-186.
2. Daffurn, K., Lee, A., Hillman, K., Bishop, G., & Bauman, A. (1994). Do nurses know when to summon emergency assistance? *International Journal of Intensive and Critical Care Nursing*, 10, 115-120.

3. Liverpool Health Service. (1998). Medical emergency team booklet. Liverpool: Author.
4. Ellis, P. (1997). Processes used by nurses to make decisions in the clinical practice setting. *Nurse Education Today*, 17, 325-332.
5. Benner, P., & Tanner, C. A. (1987). Clinical judgement: how expert nurses use intuition. *American Journal of Nursing*, 87, 23-43.
6. Benner, P., & Wrubel, J. (1982). Skilled clinical knowledge: the value of perceptual awareness. *Nurse Education*, 6, 11-17.
7. Tierney, A. (1987). A view on clinical judgement and decision making from the perspective of the nursing process. In K. Hannah, M. Reimer, W. Mills, & S. Letourneau (Eds.), *Clinical judgement and decision making: the future with nursing diagnosis* (pp. 260-267). New York: John Wiley.
8. Cioffi, J., & Markham, R. (1997). Clinical decision making: managing case complexity. *Journal of Advanced Nursing*, 25, 265-272.
9. Cioffi, J. (1998). Decision making by emergency nurses in triage assessment. *Accident and Emergency Nursing*, 6, 184-191.
10. Grossman, S. C., & Wheeler, K. (1997). Predicting patients' deterioration and recovery. *Clinical Nursing Research*, 6, 45-58.
11. Broderick, M. E., & Ammenthorp, W. (1979). Information structures: an analysis of nursing performance. *Nursing Research*, 28, 106-110.
12. Baumann, A., & Bourbonnais, F. (1982). Nursing decision making in critical care. *Journal of Advanced Nursing*, 7, 435-446.
13. Radwin, L. E. (1998). Empirically generated attributes of experience in nursing. *Journal of Advanced Nursing*, 28, 590-595.
14. Burnard, P. (1988). Building on experience. *Senior Nurse*, 8, 12-13.
15. Pyles, S. H., & Stern, P. H. (1983). Discovery of nursing gestalt in critical care nursing: the importance of the gray gorilla syndrome. *Image: The Journal of Nursing Scholarship*, 15, 51-59.
16. Smith, S. (1988). An analysis of the phenomenon of deterioration in the critically ill. *Image: The Journal of Nursing Scholarship*, 20, 12-15.
17. Benner, P. (1984). *From novice to expert: excellence and power in clinical nursing*. Menlo Park, CA: Addison Wesley.